

## **REMARKS**

This paper is responsive to the Office Action mailed November 26, 2003. Amendment, reexamination and reconsideration of the application are respectfully requested.

### **The Office Action**

In the Office Action mailed November 26, 2003:

**Claims 2, 3, 22 and 23** were objected to for including informalities;

**Claims 1-3, 8, 22 and 23** were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,813,010 to Okamoto ("Okamoto");

**Claims 4, 5, 7, 24 and 25** were rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto in view of U.S. Patent No. 5,905,811 to Shiiyama ("Shiiyama");

**Claim 6** was rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto in view of U.S. Patent No. 5,845,305 to Kujiraoka ("Kujiraoka");

**Claims 9-13, 18-20 and 26-28** were rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto in view of Shiiyama;

**Claim 14** was rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto as modified by Shiiyama and in further view of U.S. Patent No. 6,345,764 to Knowles ("Knowles");

**Claims 15 and 16** were rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto as modified by Shiiyama and in further view of U.S. Patent No. 4,903,229 to Schmidt ("Schmidt");

**Claim 17** was rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto as modified by Shiiyama and Schmidt and in further view of U.S. Patent No. 6,064,397 to Herregods et al. ("Herregods"); and,

**Claim 21** was rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto in view of U.S. Patent No. 6,336,124 to Alam ("Alam").

### **The Present Application**

In brief, the present application is directed to a system and method for automatic and semi-automatic document indexing. For instance, the invention is useful where a large document is scanned to generate an electronic version of the document. For example, the invention is used to generate a table of contents or an

index for the electronic version of the document (for example, see FIG. 1). A custom sub-section delimiter definition that is related to the document currently being processed can be generated.

For example, a review of the document may indicate that chapter headings in the document are rendered in an 18-point font at a location that is centered on a page and is two inches below the top of the page. In that case, a first sub-section delimiter may be defined as any text located two inches from the top of a page and rendered in an 18-point font.

Subheadings in the exemplary document might occur anywhere on a page but are rendered in a 16-point font with underlined characters. Therefore, a second sub-section delimiter for the document might be defined as underlined 16-point text.

Once one or more sub-section delimiters are defined, the electronic version of the document is searched to find occurrences of text corresponding to the defined sub-section delimiters. Information regarding each occurrence is used to create an index or table of contents for the document. For example, for each occurrence of 18-point text located two inches from the top of a page, the text string associated with the occurrence is recorded in association with a text location of the occurrence.

For example, the text "CHAPTER ONE" was found rendered in 18-point font two inches from a top edge of page 3 of the document. Therefore, the text "CHAPTER ONE" is associated with a page number, such as page 3, and is recorded and included in the index or table of contents. The text location information may be recorded in the form of a hypertext link. Similarly, the text and text location associated with each occurrence of underlined 16-point text is recorded and added to the index or table of contents. For example, the text location recorded may include a page number as well as an indication of a location within the page. Again, the text location information may be recorded in the form of a hyperlink.

### **The Cited References**

In contrast, the primary reference of the Office Action to Okamoto allegedly discloses a method and system for document processing using a heading rules storage and retrieval system for generating documents with hierarchical logical architectures. A heading decision section is implemented in the system for checking heading candidates that are extracted by a heading candidate extraction section according to heading rules stored in a heading rule dictionary and for deciding

whether the heading candidate is a heading. Also, a document architecture decision section is implemented in the system for checking the heading decided by the heading decision section according to document architecture rules stored in a document architecture rule dictionary. The architecture decision section is for determining the heading as satisfying the document architecture rule as a true heading, and the heading not satisfying the document architecture rule as being a false heading (Abstract).

In a segmentation process of Okamoto, a line return code and a space code or segmentation symbols such as "...", ":", ",", or ":" are determined as segmentation codes (column 5, lines 20-23).

The Office Action asserts that disclosure of these line return and space codes and segmentation symbols are disclosure of the delimiter definition recited in the claims of the present application. The Applicant respectfully disagrees. However, even if the line return, and/or space code or the segmentation symbols are considered to be delimiter definitions, in order to anticipate or suggest the subject matter of the present application, it is respectfully submitted that Okamoto would have to make an index entry for each occurrence of a line return and a space code or segmentation symbol.

Even if, as asserted by the Office Action, the logical architectural storage of Okamoto is an index, Okamoto does not make an entry in the logical architecture storage for each occurrence of a line return code and a space code or a segmentation symbol.

Instead, the detection of a segmentation code defines a segmentation sentence and begins a long process of testing to determine if the segmentation sentence includes a heading. For example, a segmentation sentence length is measured by counting characters. If the measure to value falls within a predetermined value (e.g. 40 characters), the sentence is determined as having the possibility of being a heading sentence (column 5, lines 25-29).

If the segmented sentence is determined as having the possibility of being a heading sentence according to the measured number of characters, a heading extractor decides whether a character string constituting the segmented sentence is registered in a heading dictionary (column 5, lines 30-35). If there is a match between the sentence and an entry in the heading dictionary, the sentence is determined as being a heading candidate (column 5, lines 35-41) heading

candidates are further processed to determine if they are heading words (column 5, lines 42-49). If the sentence segmented by the document processor does not correspond to any heading word registered in the dictionary, or if the segmented sentence does not coincide with any heading rule, although it is determined as being a heading candidate word, the segmented sentence is determined as being a sentence rule not included in the heading words rule (column 5, lines 50-56). Sentences determined as being a heading word and sentences determined as not being a heading word undergo still further processing (e.g., column 5, line 57 – column 6, line 47). When all the processing determines a sentence is a heading, a document architecture decision section of the system of Okamoto determines the document architecture of the heading according to rules (see tables 1-4). The determined logical architecture of the analyzed sentence is stored in a logical architecture storage as depicted in FIG. 6A-6E. The logical architecture storage (e.g., FIG. 6B) does not include occurrences of line returns and space codes or segmentation symbols. Therefore, Okamoto does not disclose or suggest searching a document to find occurrences of items corresponding to a defined subsection delimiter and creating an index from found items corresponding to the subsection delimiter occurrences.

Furthermore, it is respectfully submitted that the logical architecture of Okamoto is not an index as the term is used in the present application. For example, the index or table of contents 114 of the present application includes text from the document indicating for example, chapter titles, chapter numbers, appendacy names and so on. Other indexes may include for example, key words associated with a document or portions of a document. It is respectfully submitted that the logical architecture of Okamoto does not include text from the document indicating the subject matter of the respective portions of the document. For example, FIG. 6B does not include the heading text “1. Introduction”. Instead, FIG. 6B simply shows that a chapter heading exists at line number 3 and includes architectural information about the chapter heading indicating that the chapter heading includes a numeric portion, a punctuation portion and a heading. However, the logical architecture of Okamoto (FIG. 6B) does not include the actual numeric, punctuation and/or heading text information.

For the foregoing reasons, Okamoto does not disclose or suggest the subject matter of the present application.

It is respectfully submitted that none of the secondary references cited by the Office Action cure the deficiencies of Okamoto.

Shiiyama discloses an imager and an OCR function. However, Shiiyama does not disclose or suggest generating a human-readable index or table of contents. Instead, it is respectfully submitted, the index information referred to by Shiiyama is included in a search file (column 3, lines 49-53). The search file is used by a search program and not directly by a user. A search word is inputted in accordance with an instruction of the search process (**S31**). The input search word is analyzed into a search key suitable for the searching process (**S32**). The search key is compared with the search file in the external storage 4 (**S33**). When an index that is matched with the search key is found, document address information corresponding to such an index is returned to the application side (**S34**) (column 4, lines 1-8).

As further evidence that the index or search file of Shiiyama is not for use by a human user, Shiiyama does not disclose or suggest displaying the search file to the user. Instead, the display 6 of Shiiyama is for displaying the information inputted from the keyboard/mouse 5, image information inputted from the image scanner 1 or the like, a progress of the process, and a result of the process (column 2, lines 14-18).

Kujiraoka discloses an index creating apparatus. However, there is no motivation in the art to combine the index generating apparatus of Kujiraoka with the document processing system of Okamoto. For example, it is respectfully submitted that in Okamoto, it is simply assumed that the logical architecture is correct because it is generated by a computer program for the purposes of the computer program. It is submitted that logical architecture of Okamoto are not for use by a human. Therefore, a human judgment as to the appropriateness of an entry in the logical architecture is unnecessary.

Knowles discloses a portable hand held worldwide web access terminal for accessing HTML encoded documents located on the worldwide web. The terminal includes a bar code symbol reader in a hand-supportable housing for reading bar code symbols encoded with information, such as URLs, for use in accessing HTML encoded documents stored in information servers connected to the internet and supporting the TCP/IP standard (Abstract). However, Knowles does not disclose or suggest using a bar code or a data glyph as a delimiter for use in generating a table

of contents or index as disclosed and claimed in the present application.

Schmidt discloses a forms generating and information retrieval apparatus comprising a compact disc for storing machine readably a plurality of form files and magnetic media for storing machine readably a plurality of information files. Schmidt is unconcerned with generating an index for a document.

Herregods discloses a method for creating multiple documents having identical background regions and page-specific information regions. Herregods is unconcerned with generating an index or a table of contents for a document.

Alam allegedly discloses a computer implemented method of converting a document in an input format to a document in a different output format. The method generally includes locating data in the input document, grouping the data into one or more intermediate format blocks in an intermediate format document, and converting the intermediate format document to the output format document using the intermediate format blocks. Alam suggests a linked table of contents and/or an index maybe generated during the conversion process. However, it is respectfully submitted that Alam does not provide enabling disclosure for generating a table of contents or index.

#### **The Claims are Formal**

**Claims 2, 3, 22 and 23** were objected to for including the word "compromises" instead of the word --comprises--. However, **claims 2, 3, 22 and 23** have been amended to recite --comprises--. Withdrawal of the objection to **claims 2, 3, 22 and 23** is respectfully requested.

#### **The Claims are Not Anticipated**

**Claims 1-3, 8, 22 and 23** were rejected under 35 U.S.C. §102(b) as being anticipated by Okamoto. In explaining this rejection, the Office Action suggests that the segmentation codes disclosed by Okamoto including line return and space codes and segmentation symbols including "...", ",", ":", or ":" are a disclosure of the delimiter definition recited in **claim 1**. Additionally, the Office Action asserts that Okamoto discloses a logical architecture containing a chapter heading and that such disclosure reads on the claim limitation of creating an index for the document from the found items corresponding to the sub-section delimiter occurrences.

However, as explained above, the Applicant respectfully disagrees with both

of these assertions. It is respectfully submitted that Okamoto does not disclose or suggest an index. The logical architecture of Okamoto does not contain a chapter heading as suggested by the Office Action. Instead, it includes information regarding an estimation of where a chapter heading is located in the document and information regarding the logical structure of that heading.

For example, referring to FIG. 6B, the system of Okamoto records that it has determined that a chapter heading is located on line number 3 of the document and that the architecture of the chapter heading includes a numeric portion, a punctuation portion and a heading as well as other structural information. However, the logical architecture storage **10** does not include the actual text of the heading.

Furthermore, although Okamoto asserts that recording this information in the logical architecture somehow makes working with the document easier, Okamoto does not disclose or suggest displaying the logical architecture or any table of contents or index to a document processor user. Furthermore, the logical architecture is not created from found items corresponding to the segmentation codes of Okamoto. Instead, the segmentation codes are merely used as a means to segment an input document into small sections for processing (column 5, lines 14-29). The segmented sections or sentences are then processed or tested against rules (e.g., FIG. 4A - FIG.4D). Document logical architecture determined through this testing procedure is then stored in logical architecture **10** as depicted in FIG. 6A – FIG. 6E.

It is respectfully submitted that the processing of Okamoto does not disclose or suggest simply searching the document to find occurrences of items corresponding to the segmentation codes and creating an index for the input document from found items corresponding to the segmentation codes. If it did, then the logical architecture would simply consist of line return and space codes, semicolons, commas, colons, and ellipses (...).

For the foregoing reasons, **claim 1**, as well as **claims 2-8 and claims 22-25** which depend therefrom, is not anticipated and are not obvious in view of Okamoto.

Additionally, **claim 1** has been amended to recite generating the index for the document with found items corresponding to the sub-section delimiter occurrences. It is respectfully submitted that Okamoto does not disclose or suggest generating an index for a document with found items corresponding to sub-section delimiter occurrences and for this additional reason, **claim 1**, as well as **claims 2-8 and**

**claims 22-25** which depend therefrom, is unanticipated and unobvious in view of Okamoto.

Furthermore, the Office Action provided no explanation for the objection of **claim 8**. It is respectfully submitted that Okamoto does not disclose or suggest displaying a plurality of document pages on a user interface, selecting at least one demarcation point on at least one of the plurality of pages and using the at least one demarcation point as the defined sub-section delimiter. By way of review, one embodiment of the method of **claim 8** is described in reference to FIG. 8; on page 8, lines 3-15 of the present application. For instance, the --text location-- referred to at line 13 can be a selected demarcation point as referred to in **claim 8**. The Applicant has carefully reviewed Okamoto and has found no disclosure that could be fairly interpreted as anticipating or suggesting the subject matter of **claim 8**. Clarification is respectfully requested.

For the foregoing additional reasons, **claim 8** is unanticipated and is not obvious in view of Okamoto.

With regard to **claims 22 and 23**, it is respectfully submitted that as used in the present application, the word --symbol-- refers to a marking that is something other than text. For example, see page 7, lines 9-19 of the present application or **claim 2** which recites "a font size, a font, a text string, a text location, a symbol, and a specific point within the document". It is submitted that since both a text string and a symbol are listed, they must refer to different things. It is also submitted that as used in the present application, text refers to one or more letters, numbers and/or punctuation marks.

**Claim 22** recites --determining a sub-section delimiter comprises indicating at least one of a font size, a font, a text location, a symbol or a specific point within the document. Even if, as suggested by the Office Action, the segmentation codes of Okamoto are considered to be sub-section delimiters, they are not a font size, a font, a text location, a symbol or a specific point within the document. It is respectfully submitted that the segmentation codes of Okamoto are punctuation marks or non-printed characters and therefore fall into the category of --text--, or at least do not fall into the category of --symbols-- or font size, font, text location, or a specific point within the document.

With regard to **claims 22 and claim 23** are unanticipated and unobvious in light of Okamoto.



### **The Claims are Not Obvious**

**Claims 4, 5, 7, 24 and 25** were rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto in view of Shiiyama. **Claims 4, 5, 7, 24 and 25** depend from **claim 1** and are patentable distinct and unobvious for at least that reason.

Additionally, **claim 4** recites searching the electronic version of the document for one of characters and objects corresponding to the defined sub-section delimiter. The Office Action relies on Shiiyama for disclosure of searching for characters and directs the attention of the Applicants to column 2, lines 60-64. However, Shiiyama does not disclose or suggest searching a document for a character.

The referenced section recites, "when the likelihood is smaller than Th1 in S5, in order to store a plurality of recognition results for image data of one character code, a delimiter is outputted as identification (hereinbelow, referred to as an ID) information (S7).

It is respectfully submitted that the referenced section explains that when a test (related to the predetermined significance likelihood judgment threshold value Th1) indicates when an output character from a character recognition process is probably incorrect, that character is replaced or labeled with identification information that indicates this probable error (column 2, lines 44-66). Later, when a search algorithm searches for the word that contains the probably misrecognized letter, the label or identification information allows the search algorithm to find the word in the document even though the OCR process may have produced a misspelled word. This is possible because the identification information indicates that other letters can be substituted for the probably misrecognized letter (see column 5, line 1-line 22). Therefore, it is respectfully submitted that Shiiyama does not disclose or suggest searching an electronic version of document for one of characters and objects corresponding to define sub-section delimiter.

For the foregoing additional reasons, **claim 4**, as well as **claim 5**, which depends therefrom, is not anticipated and is not obvious in light of Okamoto and Shiiyama taken alone or in any combination.

**Claim 7** recites selecting an exemplary sub-section title, performing one of: document recognition and optical character recognition on the selected exemplary sub-section title, and using at least one recognized property of the exemplary title as a subsection delimiter definition. The Applicant has carefully reviewed the Office

Action and can find no explanation that appears directed toward the rejection of **claim 7**. Neither Okamoto or Shiiyama disclose or suggest selecting an exemplary sub-section title, performing document recognition or optical character recognition on the selected exemplary sub-section title and using at least one recognized property of the exemplary sub-section title as a sub-section delimiter definition. Clarification is respectfully requested.

For the foregoing additional reasons, **claim 7** is not anticipated and is not obvious in light of Okamoto and Shiiyama taken alone or in any combination.

Arguments similar to those submitted in support of **claim 4** are submitted in support of **claims 24 and 25**.

For those additional reasons, **claims 24 and 25** are not anticipated and are not obvious in light of Okamoto and Shiiyama taken alone or in any combination.

**Claim 6** was rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto in view of Kujiraoka. **Claim 6** depends from **claim 1** and is not anticipated and not obvious for at least that reason.

**Claims 9-13, 18-20 and 26-28** were rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto in view of Shiiyama.

**Claim 9** has been amended to recite a delimiter searcher operative to search for and record text and text location information regarding occurrences of a defined delimiter within the electronic version of the document. Neither Okamoto nor Shiiyama disclose or suggest a delimiter searcher operative to search for and record text and text location information regarding occurrences of a defined delimiter within the electronic version of a document. For the reasons cited above, the Applicant asserts that the segmentation codes of Okamoto are not defined delimiters as the term is used in the present application. Even if the segmentation codes are considered to be a defined delimiter, Okamoto does not disclose or suggest recording text information regarding occurrences of the segmentation codes. Shiiyama discloses recording every word in a document. However, Shiiyama does not disclose or suggest a delimiter searcher operative to search for and record information regarding occurrences of a defined delimiter. Furthermore, there is no motivation in the art to combine the teachings of Okamoto and the teachings of Shiiyama to arrive at the subject matter of the present application. The only motivation to do so is found in the present application. Therefore, it is respectfully submitted that the combination of Okamoto and Shiiyama against **claim 9** is based

on impermissible hind sight.

For the foregoing reasons, **claim 9**, as well as **claims 10-17 and claims 26 and 27**, which depend therefrom, are not anticipated and are not obvious in light of Okamoto and Shiiyama taken alone or in any combination.

Additionally, **claim 10** recites a user interface operative to transfer information between a document processor operator and portions of the document processor and a delimiter designator module operative to communicate with the document processor operator through the user interface in order to generate at least one delimiter designation. It is respectfully submitted that neither Okamoto nor Shiiyama disclose or suggest a delimiter designator module operative to communicate with the document processor operator through a user interface in order to generate at least one delimiter designation.

For the foregoing additional reasons, **claims 10-13 and claims 26 and 27**, which depend therefrom, is not anticipated and is not obvious in light of Okamoto and Shiiyama.

**Claims 11 and 12** depend from **claims 9 and 10** and are patentably distinct and not obvious in view of Okamoto and Shiiyama taken alone or in any combination, for at least those reasons.

**Claim 13** recites the user interface is operative to receive demarcation point designations from the document processor operator and deliver the demarcation point designations to the delimiter designator as delimiter designations. Neither Okamoto or Shiiyama disclose or suggest a document processor operator to enter or transmit a demarcation point designation to a document processor. Even if the segmentation codes of Okamoto are considered to be delimiter designations, they are not demarcation points as the phrase is used in the present application. Furthermore, Okamoto does not disclose or suggest that the segmentation codes are received from a document processor operator through a user interface. The Office Action does not assert or suggest that Shiiyama corrects this deficiency of Okamoto. It is respectfully submitted that Shiiyama does not disclose or suggest delimiter designations as disclosed and claimed in the present application. Instead, Okamoto identifies characters in an electronic version of a document that are likely to have been mistakenly recognized during an OCR process so that words in the electronic version of the document that are likely to have been misspelled due to the errors of the OCR process are not overlooked during a subsequent word search.

For the foregoing additional reasons, **Claim 13** is not anticipated and is not obvious in light of Okamoto and Shiiyama taken alone or in any combination.

**Claim 18** has been amended to recite defining a sub-section delimiter, wherein defining a sub-section delimiter includes at least one of a document processor operator building a sub-section delimiter from a list of predefined potential sub-section delimiter components, a document processor operator entering a sub-section delimiter through keyboard strokes, entering a sub-section delimiter by selecting symbols on a displayed portion of the electronic version of the document, and designating at least one demarcation point on at least one displayed portion of the electronic document to create a list of demarcation points to be used as a set of delimiter definitions.

It is respectfully submitted that neither Okamoto nor Shiiyama disclose or suggest a document processor operator building a sub-section delimiter from a list of predetermined potential sub-section delimiter components. Neither Okamoto nor Shiiyama disclose or suggest the document processor operator entering a sub-section delimiter through keyboard strokes. Neither Okamoto nor Shiiyama disclose or suggest entering a sub-section delimiter by selecting symbols on a displayed portion of the electronic version of a document. Neither Okamoto nor Shiiyama disclose or suggest designating at least one demarcation point on at least one displayed portion of an electronic document to create a list of demarcation points to be used as a set of delimiter definitions.

For the foregoing reasons, **claim 18** is not anticipated and is not obvious in light of Okamoto and Shiiyama taken alone or in any combination.

Subject matter from **claim 19** is now included in **claim 18**. Therefore **claim 19** has been cancelled.

**Claim 20** has been placed in independent form and recites defining a sub-section delimiter, wherein defining the sub-section delimiter comprises marking a paper version of the document with at least one special demarcation symbol prior to scanning the document. The Office Action does not include a specific reason for the rejection of **claims 19 or 20**. Furthermore, neither Okamoto nor Shiiyama disclose or suggest defining a sub-section delimiter comprises marking a paper version of the document with at least one special demarcation symbol prior to scanning the document.

For the foregoing reasons, **claim 20** is not anticipated and is not obvious in

light of Okamoto or Shiiyama taken alone or in any combination.

The Office Action does not include specific reasons for rejecting **claims 26 and 27**. **Claim 26** recites the delimiter designator of **claim 10** is operative to accept an indication of at least one of a font size, a font, a text location, a symbol and a specific point within the document as a delimiter designation. **Claim 27** recites a similar list but does not include --a text location--. As explained above, neither Okamoto nor Shiiyama disclose or suggest a delimiter designator operative to accept an indication of a font size, a font, a text location, a symbol or a specific point within the document as a delimiter designation.

For the foregoing additional reasons, **claims 26 and 27** are not anticipated and are not obvious in light of Okamoto and Shiiyama taken alone or in any combination.

The Office Action does not include a specific reason for the rejection of **claim 28**. **Claim 28** has been placed in independent form. Arguments similar to arguments submitted in support of **claim 18 and claim 20** are submitted in support of **claim 28**. Additionally, **claim 28** recites entering a subsection delimiter by selecting symbols on displayed portion of the electronic version of the document. It is respectfully submitted that neither Okamoto nor Shiiyama disclose or suggest entering a sub-section delimiter by selecting symbols on a displayed portion of the electronic version of the document.

For the foregoing reasons, **claim 28** is not anticipated and it not obvious in light of Okamoto or Shiiyama taken alone or in any combination.

**Claim 14** was rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto as modified by Shiiyama and in further view of Knowles.

In explaining this rejection, the Office Action stipulates that Okamoto as modified by Shiiyama fails to disclose the delimiter searcher is operative to search for a defined delimiter comprising a symbol selected from a bar code and a data glyph. The Office Action relies on Knowles for such a teaching and asserts that Knowles teaches a document containing bar codes.

However, it is respectfully submitted that Knowles discloses a document containing a bar code encoded with information such as URLs for using and accessing HTML encoded documents stored in information servers connected to the internet and supporting the TCP/IP standard. Okamoto, Shiiyama and Knowles do not disclose or suggest a bar code or data glyph defining a delimiter for a delimiter

searcher or searching for a bar code or a data glyph as disclosed and claimed in the present application. Furthermore, there is no motivation in the prior art to combine the subject matter of Knowles with the subject matter of Okamoto and Shiiyama. The only motivation to do so is the subject matter of the present application. Therefore, the rejection of **claim 14** is based on impermissible hind sight. Reconsideration is respectfully requested.

For the foregoing additional reasons, **claim 14** is not anticipated and is not obvious in light of Okamoto, Shiiyama and Knowles taken alone or in any combination.

**Claims 15 and 16** were rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto as modified by Shiiyama and in further view of Schmidt. **Claim 17** was rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto as modified by Shiiyama and Schmidt and in further view of Herregods.

**Claims 15, 16 and 17** depend from **claim 9** and are not anticipated and are not obvious in view of Okamoto, Shiiyama, Schmidt and Herregods taken alone or in any combination for at least that reason.

**Claim 21** was rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto in view of Alam. **Claim 21** depends from **claim 1** and is not anticipated and not obvious for at least that reason.

#### **Telephone Interview**

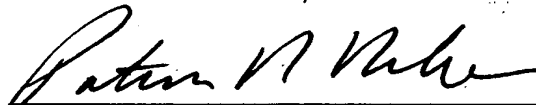
In the interests of advancing this application to issue the Applicant(s) respectfully request that the Examiner telephone the undersigned to discuss the foregoing or any suggestions that the Examiner may have to place the case in condition for allowance.

### **CONCLUSION**

**Claims 1-18 and claims 20-28** remain in the application. **Claims 29 and 30** have been added. **Claim 19** has been cancelled. For the reasons cited above, the application is now in condition for allowance. Accordingly, an early indication thereof is requested.

Respectfully submitted,

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